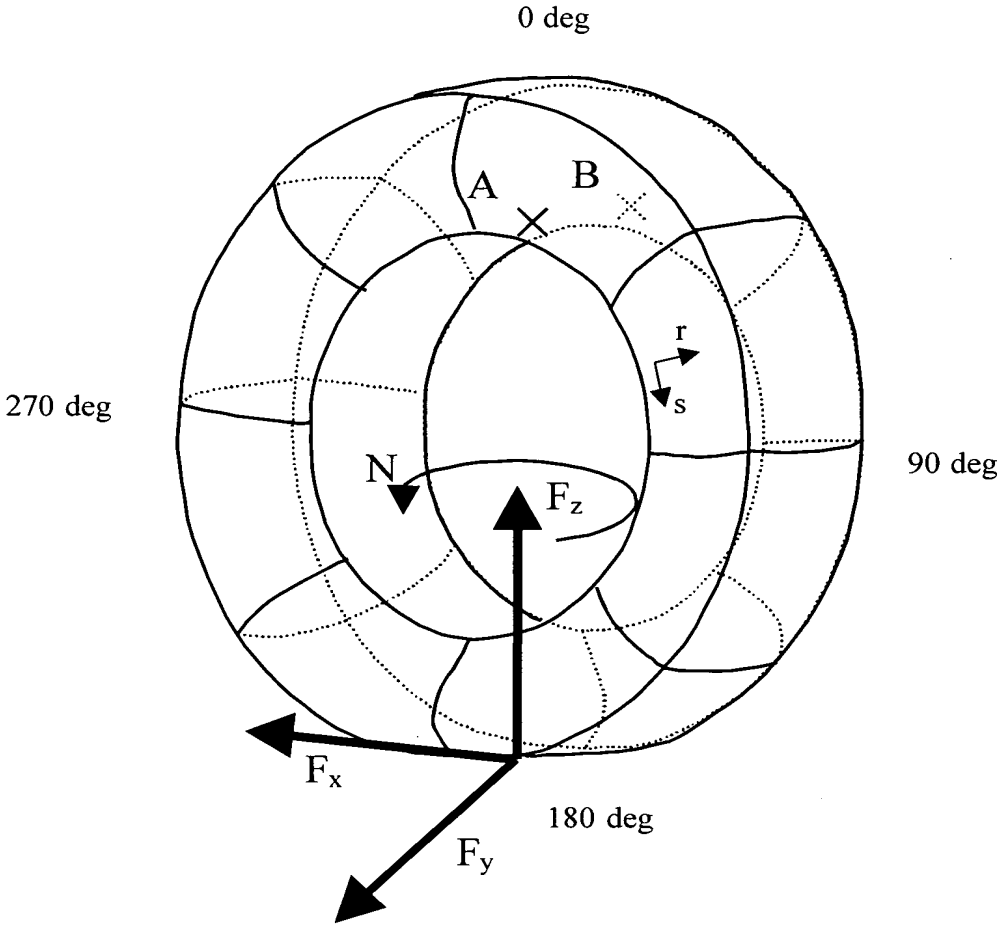


Figure 1

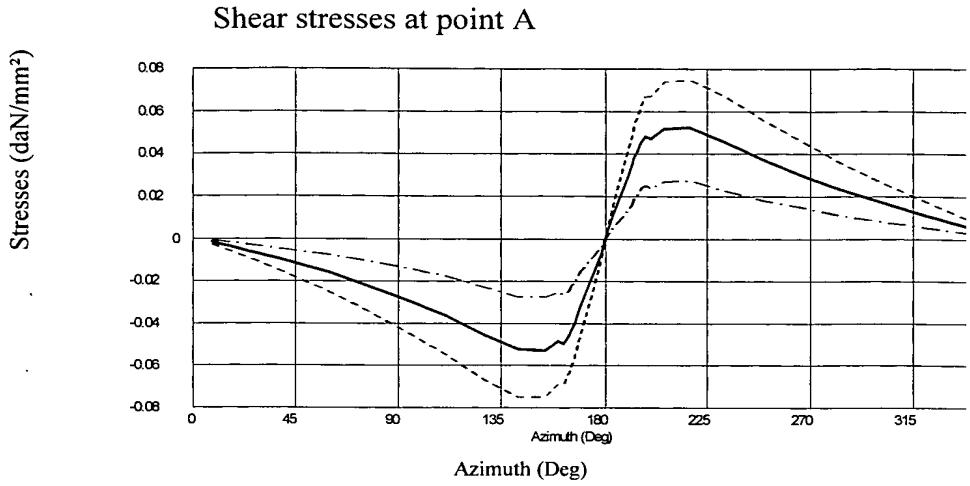
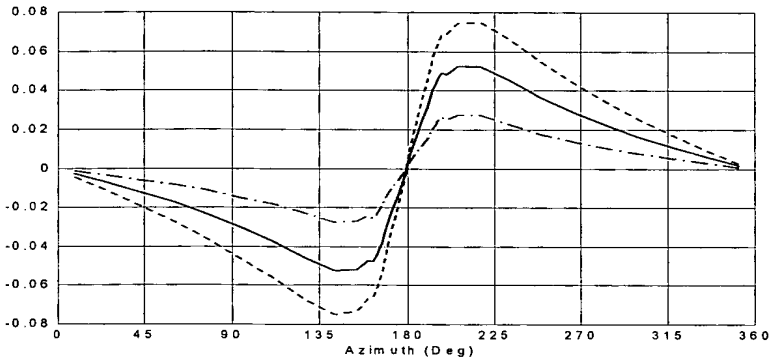

Shear stresses at point A
Stresses (daN/mm²)
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
0
45
90
135
180
225
270
315
Azimuth (Deg)
Azimuth (Deg)

Figure 2a

Shear stresses at point B

Stresses (daN/mm²)

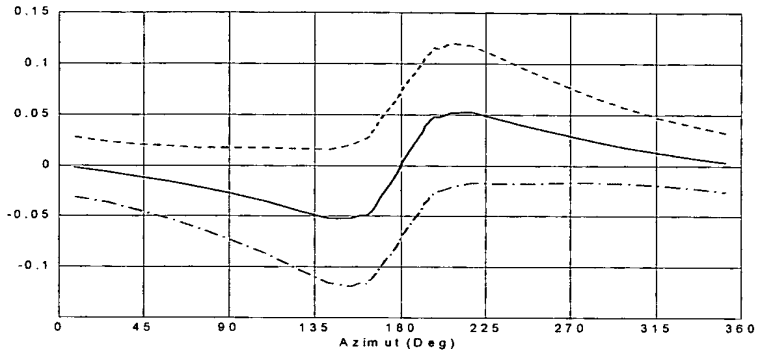


Azimuth (Deg)

Figure 2b

Shear stresses at point A

Stresses (daN/mm²)

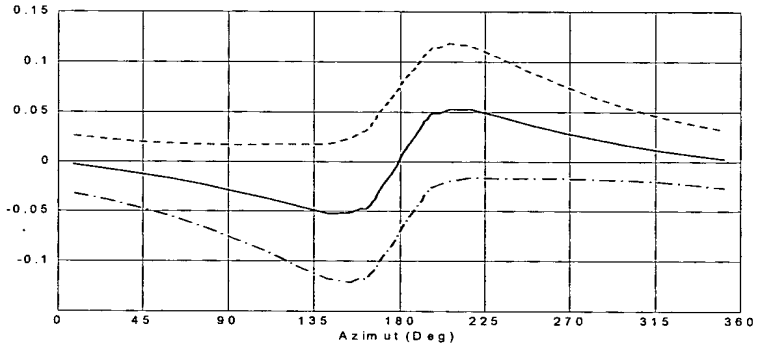


Azimuth (Deg)

Figure 3a

Shear stresses at point B

Stresses (daN/mm²)



Azimuth (Deg)

Figure 3b

Shear stresses at point A

Stresses (daN/mm²)

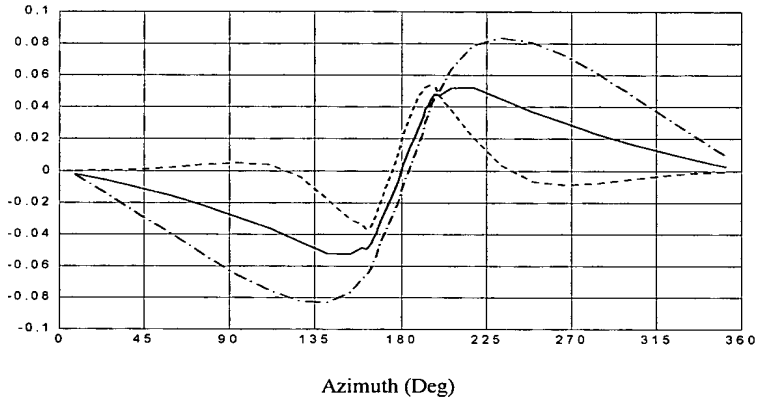


Figure 4a

Shear stresses at point B

Stresses (daN/mm²)

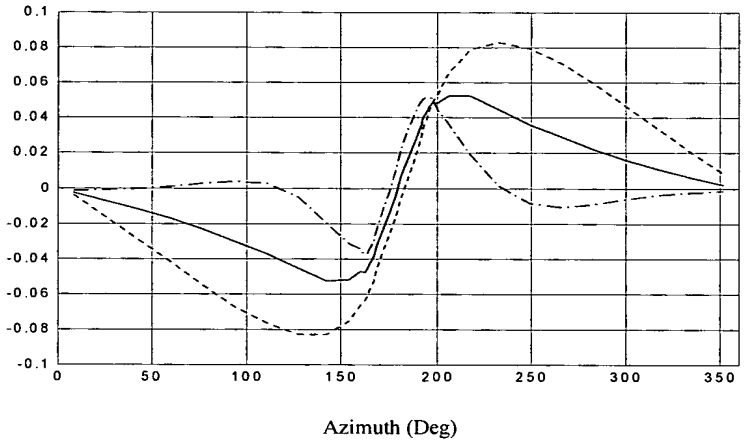


Figure 4b

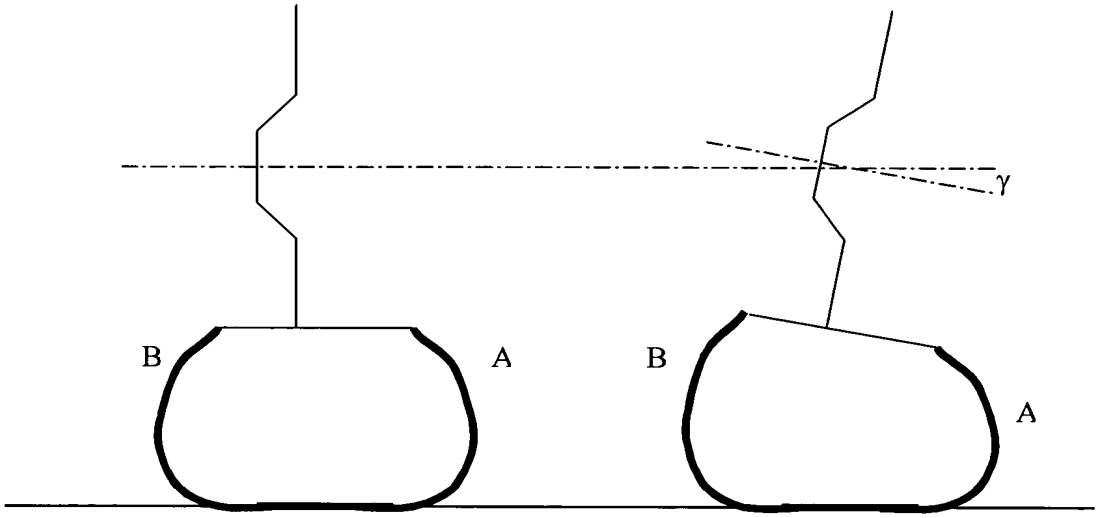


Figure 5

Shear stresses at point A

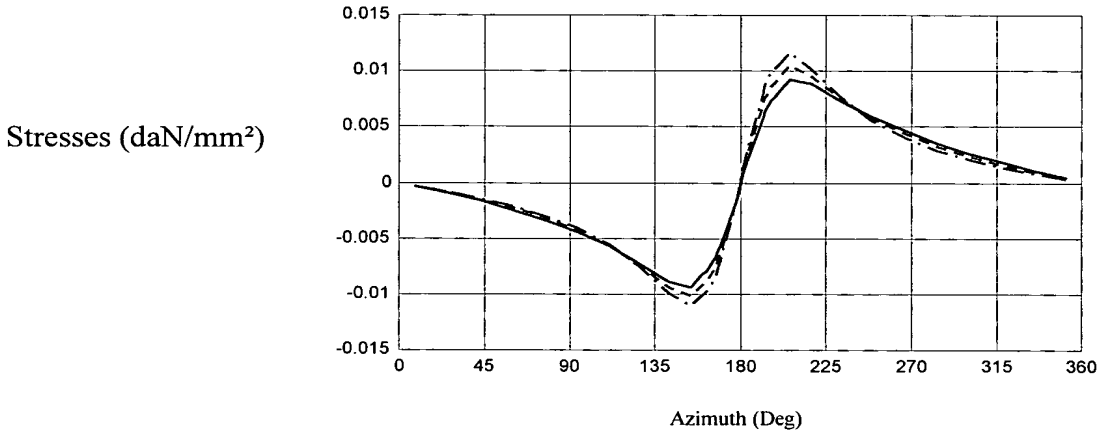


Figure 6a

Shear stresses at point B

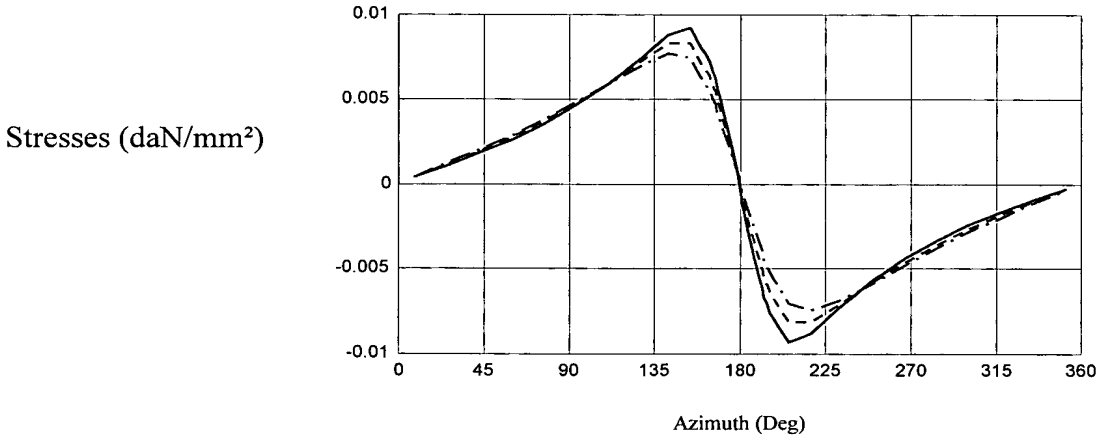


Figure 6b

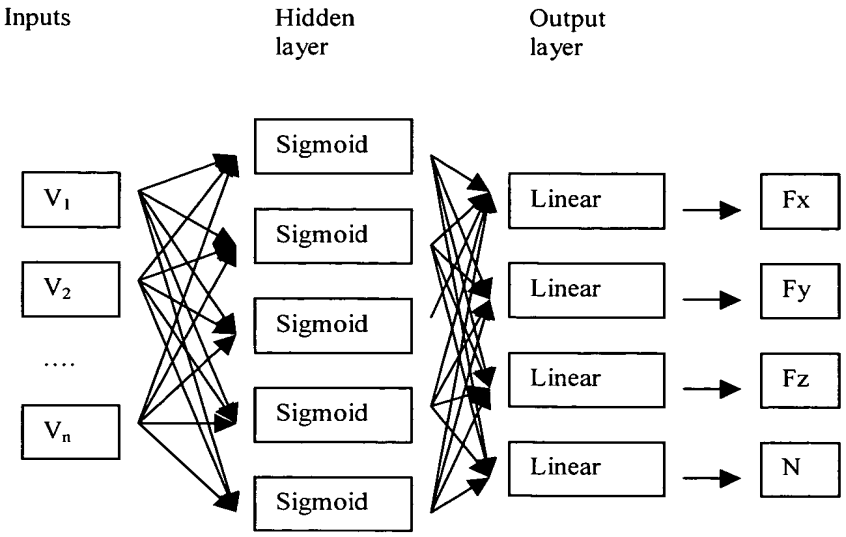

Inputs
Hidden layer
Output layer
V_1
V_2
....
V_n
Sigmoid
Sigmoid
Sigmoid
Sigmoid
Sigmoid
Linear
Linear
Linear
Linear
Fx
Fy
Fz
N

Figure 7

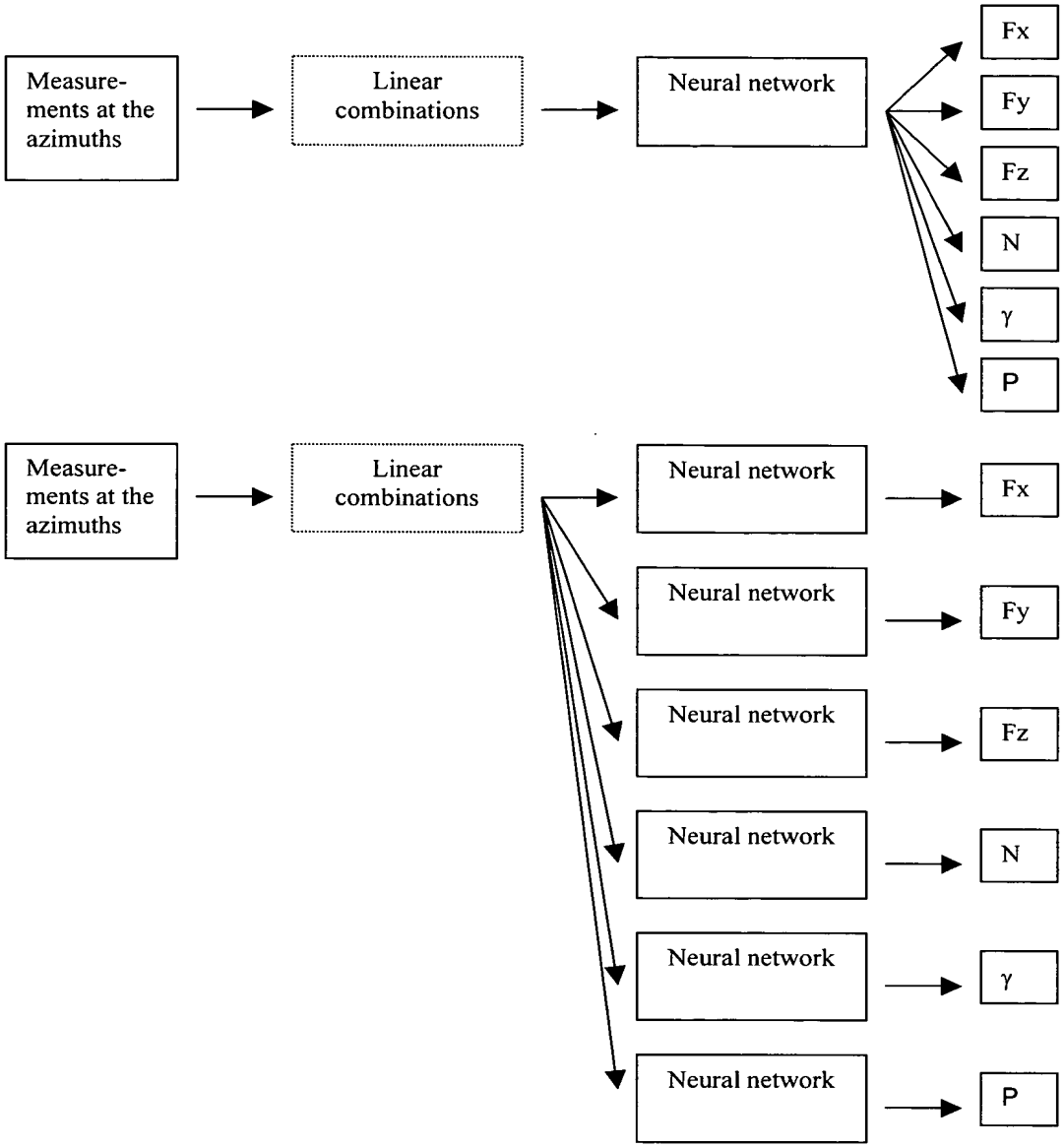

Measure-ments at the azimuths
Linear combinations
Neural network
Fx
Fy
Fz
N
γ
P
Measure-ments at the azimuths
Linear combinations
Neural network
Fx
Neural network
Fy
Neural network
Fz
Neural network
N
Neural network
γ
Neural network
P

Figure 8

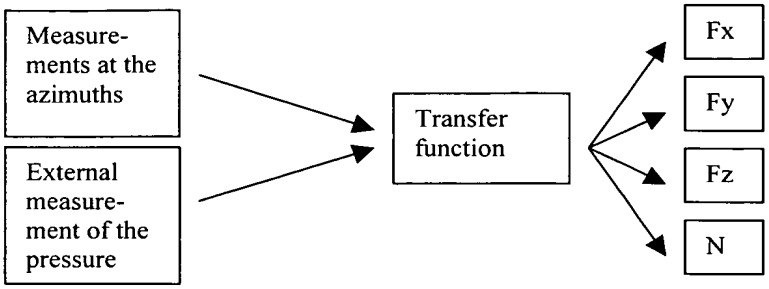


Figure 9a

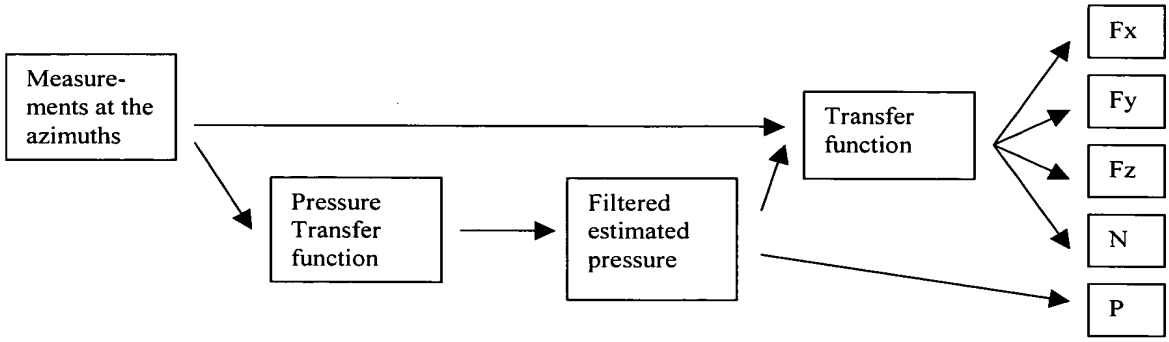


Figure 9b

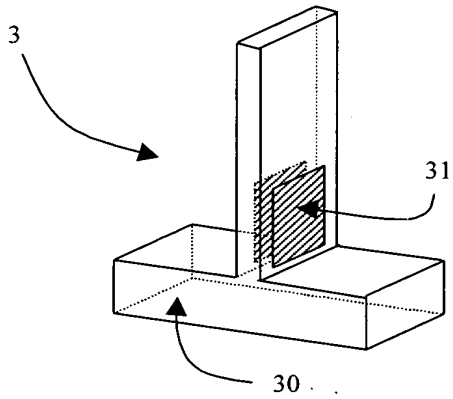


Figure 10

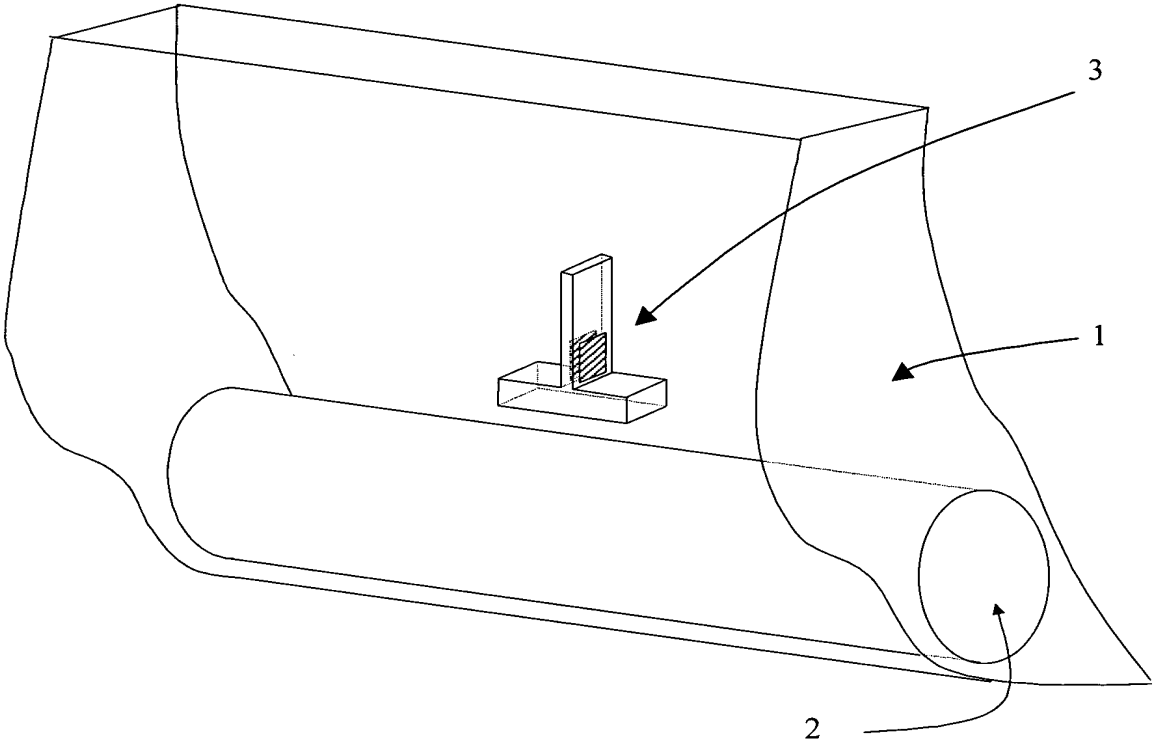


Figure 11

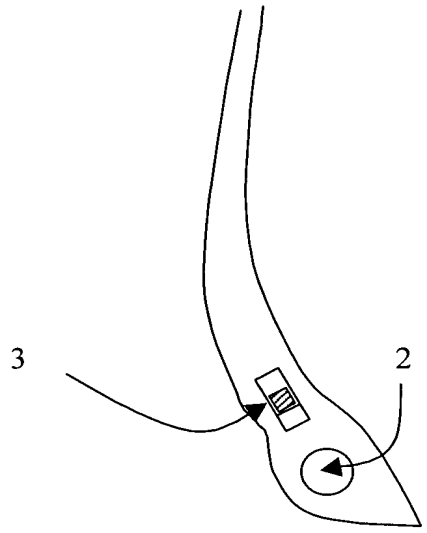
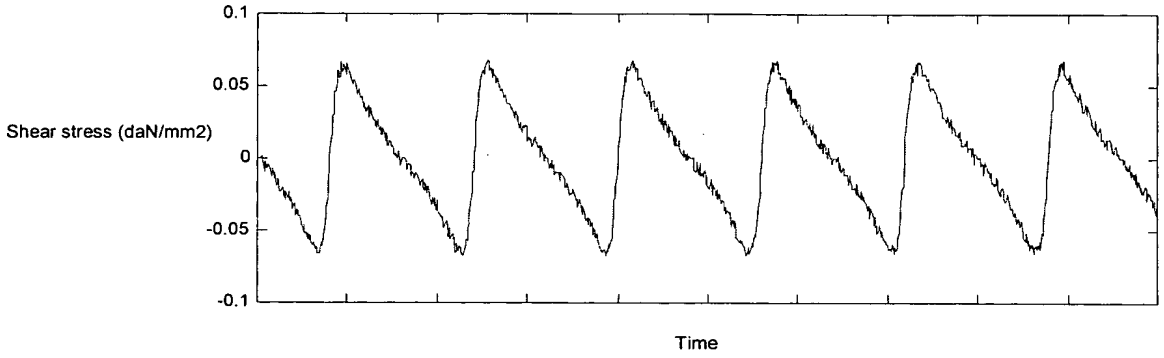


Figure 12

Measured signal



Filtered signal

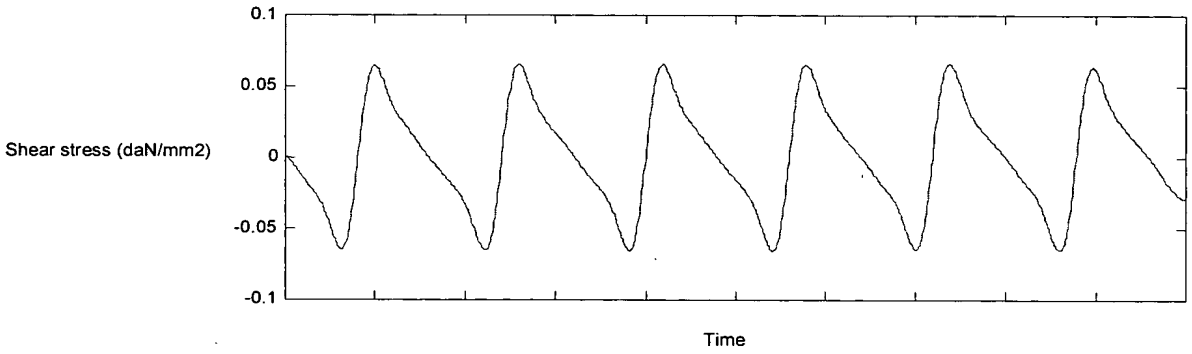


Figure 13

Principle of thresholding the differentiated signal

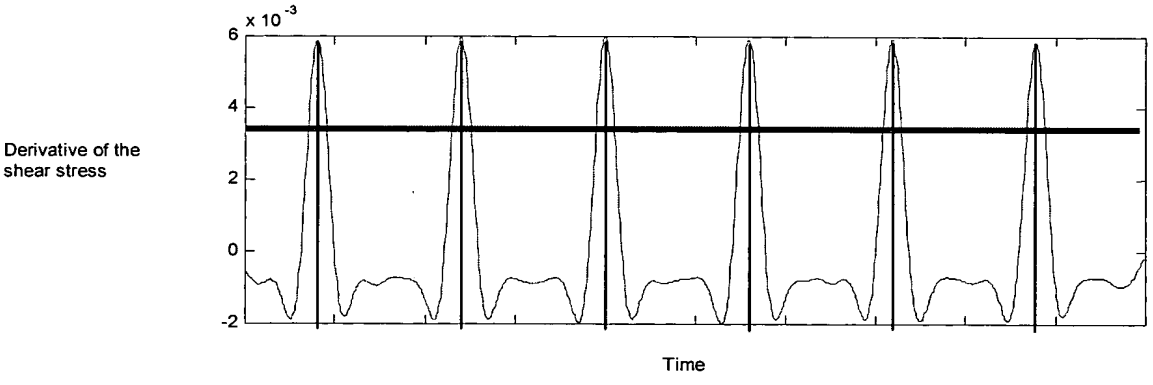


Figure 14

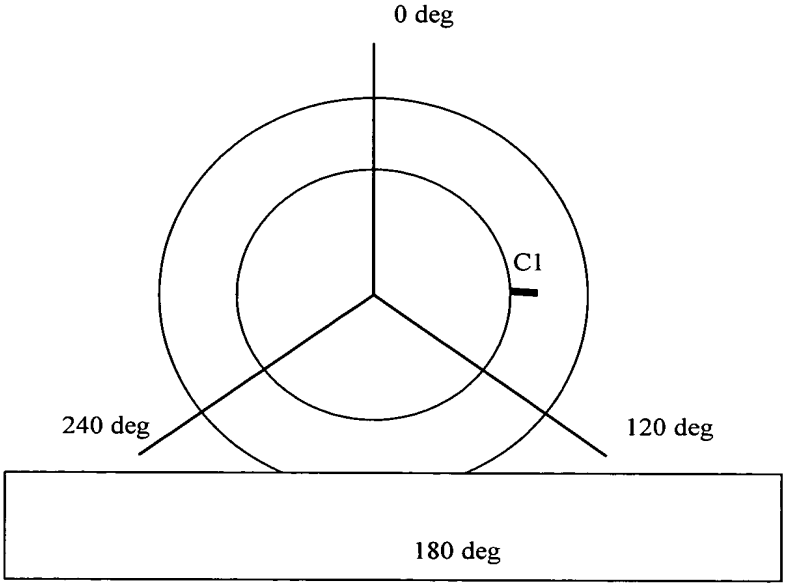


Figure 15

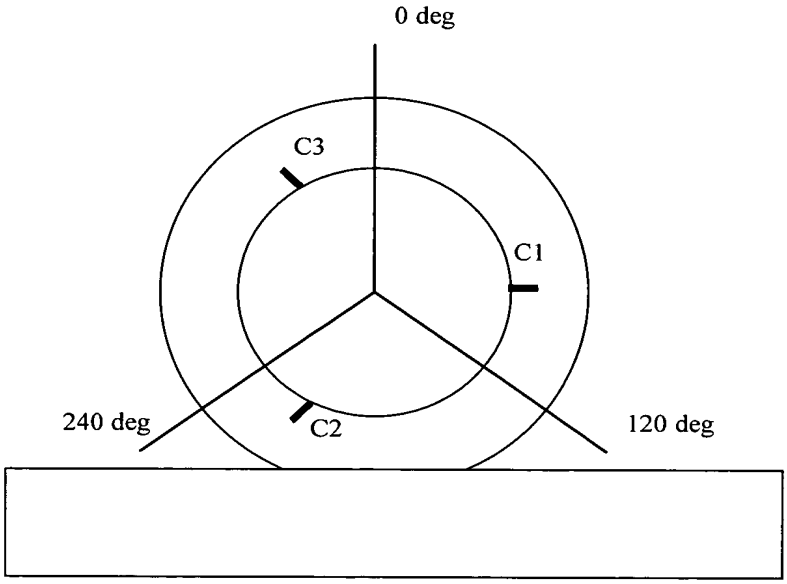


Figure 16

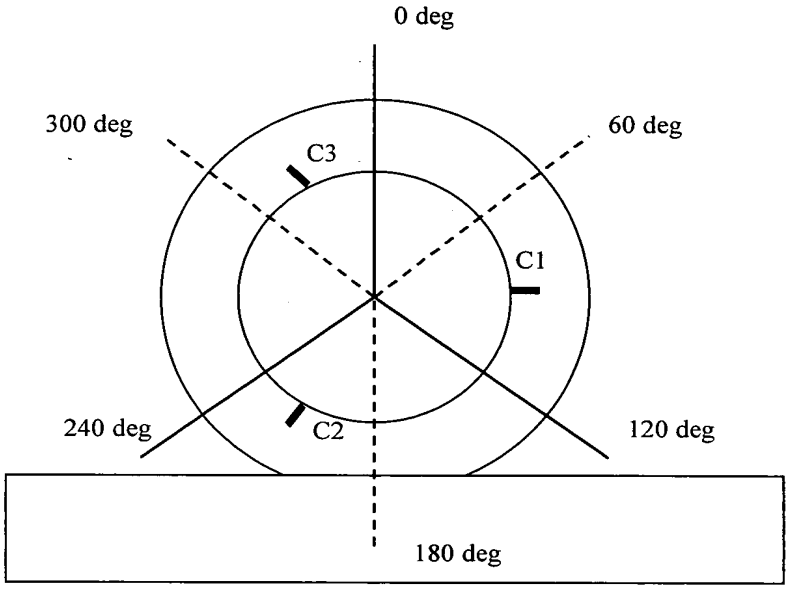


Figure 17